



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

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Tesoro Petroleum Corporation
300 Concord Plaza Drive
San Antonio, TX 78216-6999

Re: United States et al. vs. BP Exploration & Oil Co., Inc et al., Civil Action No. 2:96 CV 95
RL (N.D. Ind. 2001) – Acid Gas Flaring Incident on August 12, 2002 at the Mandan,
North Dakota Refinery

Dear Sirs:

The United States Environmental Protection Agency (EPA) received two reports dated September 10, 2002, and October 25, 2002, regarding the August 12, 2002 acid gas flaring incident at the Tesoro Petroleum Companies, Inc. (Tesoro) refinery located in Mandan, North Dakota. Based on the information submitted in the reports, EPA has determined that the root cause of the incident was a pressure surge due to high flow from the sour water stripper and that such root cause is a recurrence. EPA, however, also finds that Tesoro is not subject to stipulated penalties according in Paragraph 22.C.1.c.2.ii because Tesoro had scheduled, but not yet completed, the implementation of the corrective action for this root cause at the time of the recurrent incident.

Tesoro reported that the August 12, 2002 acid gas flaring incident lasted for 4.7 hours and resulted in the release of 2.9 tons of sulfur dioxide (SO₂) to the atmosphere. Tesoro reported that the root cause of the flaring incident was damage to the process equipment from "pressure surges due to high flow from the sour water stripper." The pressure surges resulted from the flashing of the hydrocarbons carried over in the sour water gas stream. The surges caused thermal cycling of the waste heat boiler. Due to that thermal cycling, the refractory on the hot gas by-pass piping

Source/Tesoro/Mandan/Tesoro-Mandan-99-02-08-12-PA.pdf

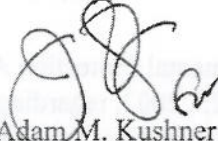
from the waste heat boiler spalled off, exposing the carbon steel to elevated temperatures and resulting in failure of the structural integrity of that piping elbow. Tesoro shut down the sulfur recovery plant in response to the cracked piping elbow. At that time, Tesoro diverted the acid gas feed to the flare. Tesoro minimized the SO₂ emissions during the flaring incident by reducing the fresh feed to the distillate desulfurization unit, thereby, also reducing the amount of acid gas produced.

According to Tesoro, installation of a sour water stripper feed tank would minimize a recurrence of a flaring incident from the pressure surges. Such a tank would provide for much greater phase separation and, thereby, reduce hydrocarbon carryover and flashing. Tesoro initiated the project for installation of the sour water stripper feed tank on May 10, 2002. Installation was not complete at the time of the August 12, 2002 incident. Tesoro completed the installation of the sour water stripper feed tank on August 14, 2003 at a cost of \$700,000.

EPA recognizes that Tesoro has correctly identified that the root cause of this incident is subject to stipulated penalties under Subparagraph 22.C.i.a.4.i because the flaring incident resulted from pressure surges resulting from high flow from the sour water stripper. However, EPA finds that the provisions at Subparagraph 22.C.i.c.2.ii more appropriately apply because Tesoro had already scheduled, but not completed, the implementation of the corrective action at the time of this incident. Therefore, EPA does not assess stipulated penalties for this acid gas incident.

EPA finds this is the third flaring incident since the entry of the Consent Decree and the second flaring incident at the Mandan refinery in a rolling 12-month period. If you have any questions about this response, please contact Mr. Patric McCoy at (312) 886-6869 or Mr. Scott Whitmore at (303) 312-6317.

Sincerely,



Adam M. Kushner
Acting Director
Air Enforcement Division

cc (electronically): Scott Whitmore, U.S. EPA, Region 8
Tom Bachman, Division of Air Quality, NDDH
Nathan Frank, U.S. EPA, Region 5
Patric McCoy, U.S. EPA, Region 5
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Norma Eichlin, Matrix Environmental & Geotechnical Services